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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,296	04/01/2004	Tomofumi Miyamoto	008312-0309052	6129
909 7590 09/20/2007 PILLSBURY WINTHROP SHAW PITTMAN, LLP Eric S. Cherry - Docketing Supervisor P.O. BOX 10500 MCLEAN, VA 22102			EXAMINER LEE, PING	
			ART UNIT 2615	PAPER NUMBER
			MAIL DATE 09/20/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/814,296	Applicant(s) MIYAMOTO, TOMOFUMI	
	Examiner Ping Lee	Art Unit 2615	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Torii (JP 2003-015651).

Regarding claims 1 and 4, Torii discloses an electronic apparatus comprising:

a casing (5); and

a speaker unit (11) located in the casing,

the speaker unit including a cabinet (12), a speaker (15) arranged in the cabinet and exposed to the outside of the cabinet, and a port (12a1 or 12a2) which is defined in the cabinet to open the outside of the cabinet and through which a sound emitted from the backside of the speaker into the cabinet is radiated outward from the cabinet,

the speaker being exposed to the outside of the casing through an opening defined in an outside wall of the casing, and the port of the speaker unit opening into the casing.

Regarding claim 7, Torii shows that the respective ports thereof oriented in the same direction.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torii in view of Uehara (US006476304B2).

Regarding claims 3 and 9, Torii discloses the keyboard, but fails to show a display unit having a display panel. Torii teaches a general digital piano with an improved sound reproduction through a novel design of the speaker cabinet. One skilled in the art would have expected that the same design could be applied to other digital piano, including the piano with a display unit, such as the one as shown in Uehara. In another way, Torii's piano would be improved if a display unit is utilized to provide some visual feedback for the user. Thus, it would have been obvious to one of ordinary skill in the art to modify Torii in view of Uehara by incorporating a display unit in order to give the user visual indication.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Torii in view of Watanabe et al (hereafter Watanabe) (JP 07-222278).

Regarding claim 5, Torii fails to show that the cabinets having different capacities. Watanabe teaches that the sound would be improved with the cabinets having different sizes. Thus, it would have been obvious to one of ordinary skill in the

art to modify Torii in view of Watanabe by having different sized-cabinets in order to improve the low pitch sound.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Torii in view of Freadman (US005550921A).

Regarding claim 6, Torii's abstract fails to show that the ports are opposed to each other. Freadman teaches the claimed feature to improve the bass response. Thus, it would have been obvious to one of ordinary skill in the art to modify Torii in view of Freadman by arranging the ports to opposed to each other in order to have better bass response.

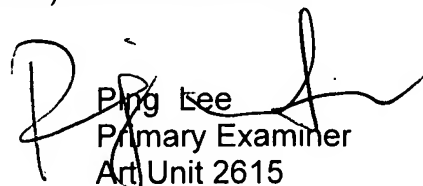
7. Claims 1-4, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Numano et al (hereafter Numano) (US006744623B2) in view of Markow et al (hereafter Markow)(US006359994B1).

Regarding claims 1-4, 7 and 9, Numano discloses an electronic apparatus with a casing, left and right speaker cabinets protruded, a display and a keyboard. However, Numano fails to show the cabinets having ports. Markow teaches the benefit of having ported speaker cabinet to improve surround sound experience. Thus, it would have been obvious to one of ordinary skill in the art to modify Numano in view of Markow by having ported cabinets in order to improve low frequency response.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Ping Lee  
Primary Examiner  
Art Unit 2615

pwl